

### CLAIMS

The following listing of claims replaces all prior versions and listings of claims in the above-referenced application:

1           1.     (Previously presented) A rate adaptive system for optical  
2 communication networks comprising:

3               a plurality of optical transceivers capable of transmitting and receiving optical  
4 signals at a plurality of rates to each other, and

5               an optical fibre linked to said optical transceivers,

6               wherein said system is configured to cause said optical transceivers to transmit  
7 and receive optical signals at an initial rate and to adapt said initial rate based upon an  
8 error condition by causing said optical transceivers to transmit and receive at a  
9 different rate.

1           2.     (Previously presented) The system of claim 1, wherein said error  
2 condition is a failure to synchronize a received signal.

1           3.     (Previously presented) The system of claim 1, wherein said system  
2 is further configured to calculate an error coefficient based on said received signals,  
3 and said error condition comprise said error coefficient exceeding a predefined range.

1           4.     (Previously presented) The system of claim 1, wherein said initial  
2 rate is lowered according to predefined percentages of said initial rate in response to  
3 said error condition.

1           5.     (Previously presented) The system of claim 4, wherein said  
2 percentages are selected from the group of 75, 50 and or 25 percent of said initial rate.

1           6.     (Previously presented) The system of claim 1, wherein said initial  
2 rate is 10 Gb/s.

1           7.       (Previously presented)   The system of claim 1, wherein said system  
2   is configured to operate in an optical Ethernet network.

1           8.       (Previously presented)   The system of claim 1, wherein said system  
2   is further configured to notify a network operator in the event of said error condition.

1           9.       (Previously presented)   A rate adaptive method for operating an  
2   optical communication network, comprising:  
3       transmitting data at an initial rate,  
4       receiving said data at said initial rate,  
5       evaluating said data to determine if an error condition exists, and  
6       adapting said rate based upon said evaluation by transmitting and receiving at  
7   a different rate.

1           10.      (Previously presented)   The method of claim 9, wherein adapting  
2   said rate comprises lowering said initial rate according to predefined percentages of  
3   said initial rate in response to said error condition.

1           11.      (Previously presented)   The method of claim 10, further comprising  
2   notifying a network operator in the event of said error condition.

1           12.      (Previously presented)   An optical transceiver module for a rate  
2   adaptive system for optical communication networks comprising  
3       means for transmitting an optical signal via an optical fibre at a plurality of  
4   optical signal rates,  
5       means for receiving an optical signal transmitted at said plurality of optical  
6   signal rates,  
7       means for determining an error condition, and  
8       means for adapting an optical signal transmission rate based upon the error  
9   condition by transmitting and receiving at a different rate.

1           13. (Previously presented) A rate adaptive method for operating an  
2   optical communication network, comprising:  
3           transmitting test signals at an initial rate,  
4           receiving said test signals at said initial rate,  
5           evaluating said test signals to determine if an error condition exists, and  
6           adapting said rate based upon said evaluation by transmitting and receiving at  
7   a different rate.